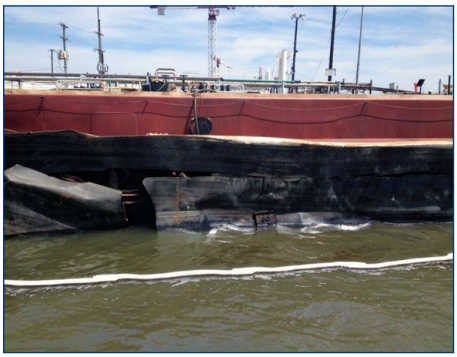
THE RESPONDER
TEXAS GENERAL LAND OFFICE • JERRY PATTERSON, COMMISSIONER
OIL SPILL PREVENTION AND RESPONSE PROGRAM • JUNE 2014

Texas City Y Spill, the Galveston Area

On March 22, at approximately 1235, the Texas General Land Office Oil Spill Prevention and Response Program received a report of a collision between the cargo vessel *Summer Wind* and tank barge *Kirby 27706,* being pushed by towing vessel *Miss Susan* in the vicinity of the Texas City Y east of the Texas City Dike. The *Kirby 27706* was loaded with 27,000 barrels of RMG 380 (Marine Fuel Oil/Special Bunker). As a result of the collision, the *Kirby 27706* sustained damage to the No. 2 starboard tank and discharged approximately 4,000 barrels (168,000 gallons) of RMG 380. The *Summer Wind* sustained damage to its bow of the vessel, however, no discharge was noted. The ship channel was secured to traffic from Lighted Buoy 31/32 to south of the Intracoastal Waterway (ICW), and all traffic on the ICW (East Bound/West Bound) was stopped. Bolivar Ferry service was suspended and the Texas City Dike and Seawolf Park were closed to the public.

The initial Incident Command Post was located at Marine Safety Unit (MSU)–Texas City. Prompt notifications were made to area responders and federal, state and local agencies regarding this spill event. Numerous spill contractors were called in to mitigate the spilled product using skimmers, boom and sorbent materials. A Unified Command (UC) was established and represented by the U.S. Coast Guard, Texas General Land Office, Kirby Inland Marine Inc., LP, City of Texas City, City of Galveston and Galveston County.



Damage sustained to the No. 2 Starboard tank of *Kirby 27706.*

As with any spill event there were challenges: Fog, tides, currents and strong shifting winds bedeviled responders. The Area Contingency Plan–Site Specific Surveys were used and protection strategies developed to protect the sensitive areas located near and around the area of discharge. Thousands of feet of containment boom were deployed from the Texas City Dike staging area to contain, deflect and protect numerous areas within Galveston Bay, Bolivar Roads, East Bay and the Galveston Channel. A fleet of skimmers was deployed and directed by helicopters to recover the floating product. There were a number of areas impacted by this oil spill, with the hardest hit areas being the Texas City Dike, Pelican Island and Big Reef, located on east Galveston Island. Shoreline impact removal was labor intensive, with hundreds of spill response professionals working to remove oil from the shoreline and rip-rap in the area.

The *Kirby 27706* being lightered.

The reopening of the Houston Ship Channel was a priority. Cruise ships needed to off-load passengers and the ever growing number of barges and deep-draft vessels needing to make port required the UC to make every effort to remove the floating oil from the water's surface and clean the hull of affected vessels. Numerous vessel decontamination teams were established and provided rapid response and clean up to vessels impacted by the oil. The decon teams were very effective, utilizing pressure washing on the oiled vessels, which greatly added to the success and prompt reopening of the ship channel.

"This was not our first rodeo," said Richard Arnhart, Regional Director and State On-Scene Coordinator. "In fact we had an event 20 years ago almost to the day, similar amount spilled, location and type of product. From that event years ago, we were able to design response strategies still being utilized today. We will learn from this spill event and fine tune our plans to be even better prepared should this happen again." **More about the spill on page 5.**

Spill response professionals work to remove oil from the shoreline.

Historical USS *Forrestal* Enters the Brownsville Ship Channel on its Final Journey

In February 2014, USS *Forrestal* entered the Port of Brownsville on its final journey. The historic ship was the world's first "supercarrier," launched in 1954 from Newport News Shipbuilding and Drydock Co. in Virginia and commissioned in 1955. To date, it's the longest vessel to enter the port at 1,063 feet.

On February 5, Sen. John McCain, probably the *Forrestal's* most famous veteran, released a statement in which he recalled a catastrophic fire that took place aboard the vessel on July 29, 1967, during the Vietnam War. The incident nearly cost the future senator and presidential candidate his life. In recognition of the 3,500 men and women who served aboard the ship, All Star Metals conducted an invitation-only event on February 28 for local officials, dignitaries and a few others, including representatives from the USS FORRESTAL Association.

During the vessel's tow into the Port of Brownsville, the Texas General Land Office, U.S. Coast Guard, Texas Parks and Wildlife Department and U.S. Customs and Border Protection assisted in securing a safety zone around the vessel. By doing so, pleasure craft and other spectators were kept at a safe distance as the *Forrestal* was moving to its final resting place. The *Forrestal* was purchased by All Star Metals to recycle steel and other metals from the large vessel. As the old warhorse awaits its turn to enter the scrap yard, it's currently encompassed by 1,400 feet of containment boom for oil spill prevention purposes. Although the vessel is not in operation, it still poses a spill threat to the Brownsville Ship Channel due to the oil remaining on board.

GLO Region 4 personnel secure a safety zone around the USS *Forrestal*.

The USS *Forrestal* entering the Port of Brownsville.

The USS *Forrestal* is encompassed by 1,400-feet of containment boom while waiting to enter All Star Metals scrapyard.

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Report oil spills
1-800-832-8224
24 hours

The Responder is published by the Texas General Land Office. Questions and comments may be submitted to Angela Jarvis via email at angela.jarvis@glo.texas.gov or by phone at 281-470-6597.

Mystery Spills Present Unique Challenges

Early in 2014, the Nederland (Region 1) Oil Spill Response Field Office had five "mystery" spills reported over a six-week period. Some spills are reported as mystery spills because there doesn't appear to be an identified source or a responsible party (RP). Mystery spills can involve considerable time and effort to investigate and determine the source and ultimate cause of a spill. Both Texas General Land Office Oil Spill staffers and the U.S. Coast Guard MSU Port Arthur (Region 1's federal response partner) teamed up to investigate the source and cause of all five spills. One mystery spill is still being investigated.

The first spill was reported on January 7th and was located at the Sunoco Marine Terminal. GLO Senior Response Officer (SRO) Johnny Darcey arrived on-scene to find oil alongside the *T/V Houston* moored at the Sonoco ship dock. Unable to determine an apparent source and after an exhaustive search for a responsible party, Darcey decided to sample the ship because all other pollution sources were ruled out as a possibility. All possible ship sources were sampled on-board including the ballast water pumps. The sample results were a positive match with the product carried by the tank ship, but more importantly, there was a detectable amount of petroleum biomarkers present in the ship's ballast water pump. It was Captain of the Port Joe Paitl who recognized that even slightly contaminated ballast water was not normal and trace amounts of product in the ballast water tanks indicated a problem with the ship's plumbing or the integrity of the ballast water tanks. Ballast water should not contain any contaminants. This led the team to further investigate all the ship's ballast water tanks, where they finally discovered a 3-inch-long crack between the No. 2 cargo tank and the No. 2 center ballast water tank.

The following day, January 8th, another mystery spill was reported at the Pleasure Island Marina on the north end of Sabine Lake. A 600-foot-long by 4-inch-wide sheen was observed entering the marina from Sabine Lake. Response Officer (RO) Jim Williams met with USCG MSU personnel on-scene to investigate. Accumulations of black oil along with paraffin-laden condensate were apparent inside the marina's newly constructed floating docks. A GLO response vessel was deployed to trace the sheen to its source. Unfortunately, the sea state went from calm to whitecaps in just a few hours. An exhaustive boat patrol was unable to find a potential source, even after circling a drilling rig some two miles out in Sabine Lake. Because no tangible pollution source could be identified, the USCG federalized the response and cleanup. Although the spill was not large in volume, the physical impact to the Pleasure Island Marina was substantial. The marina has been recovering after near total destruction by Hurricane Ike in 2008. Like many other marinas in Texas, Pleasure Island Marina is adjacent to many small businesses and homes, so clean up of bulkheads and recreational vessels was extensive. The following morning, with calm seas, another response vessel was deployed to try to track the spill to its source. Although a light sheen was visible in Sabine Lake, it was not concentrated enough to find the source. The USCG also tried unsuccessfully to arrange an overflight to identify the source of the spill. Calm seas finally prevailed, which allowed RO Williams to track the sheen by boat to a Ballard Exploration Platform two miles southeast of the marina. Upon boarding the platform a residual yellow paraffin coating on many of the interior surfaces of the platform was detected. An emergency phone number was found on the platform and one hour later a representative from Ballard Exploration arrived by boat and assumed responsibility for the leak.

This Ballard Exploration Platform turned out to be the mystery spill source.

On February 4th, another mystery spill was reported at the Versabuild mooring area in Sabine Pass. SRO Darcey observed a reddish petroleum product in the water and after another extensive search, no source could be identified. SRO Darcey decided to sample all the possible sources in the area. Samples were taken from two Crosby Tugs in the area, and all possible sources from the Versabuild Heavy Lift Barge. Analysis of the samples was conclusive: The reddish petroleum product was from the bilge of the *M/V Crosby Viking*, which took responsibility for the unpermitted discharge.

Another unknown source spill was reported on February 17th from the Texaco Island Turning Basin in Port Arthur. Ross Penton, Assistant Regional Director (ARD), and RO Williams responded to find about 40 gallons of red-dye diesel in the corner of the Texaco Island Turning Basin. While RO Williams searched for sources by boat around the turning basin, ARD Penton searched for land-based sources. One possible source of the spill was a tug boat with its fuel tank ripped open. The USCG federalized the cleanup and the GLO and USCG collected samples from all available sources. This investigation remains open.

A few days later, on February 21st, the Jefferson County Sheriff's Office contacted RO Williams to report a large oil slick was coming into its dock at the Sabine Pass Port Authority. RO Williams contacted his counterpart at USCG MSU Port Arthur. Once on-scene, the responders discovered approximately 150 gallons of what appeared to be a mix of bilge oil and diesel fuel in several locations at the Sabine Pass Port Authority and the southern end of Kim Daughter Dock. A commercial fishing vessel started to leave the scene when USCG Petty Officer Weddle contacted his office and within five minutes the fishing vessel returned to the docks. This vessel was sampled immediately. The USCG federalized the clean up of all contaminated locations in the area. The USCG and GLO began the task of sampling over 20 fishing vessels and three tug boats in the immediate area. Finally, a week later, the sample results came back with a positive match to the *F/V Miss Diane 1*.

While it's somewhat unusual to have five mystery spills in a six-week period, it's not unprecedented. Rapid deployment to the scene of the incident, investigating the path of discharge to the water, exhibiting due diligence, taking witness statements and sampling and testing all available sources takes time and effort, but it does pay off. The value of fingerprinting oil as a forensic tool cannot be discounted when trying to identify a person responsible for an unpermitted discharge. Teamwork with our federal response partner, the USCG MSU Port Arthur, and in-depth investigation solved four out of five mystery spills.

GLO–USCG Partnership Results in Successful Outcome

The *M/V Louie Tide* and the *M/V Ken Tide* encounter foul weather in the Gulf of Mexico while being towed to Bay Bridges LLC, Port of Brownsville.

On October 31, 2013, the *M/V Louie Tide* and *M/V Ken Tide* were being towed to Bay Bridges LLC, Port of Brownsville, to be dismantled. The offshore supply vessels were in a long side tow when they encountered foul weather in the Gulf of Mexico. Following are the challenges and decisions faced by the Texas General Land Office and U.S. Coast Guard as a result:

- Damage to the ballast tank caused a significant list to the port side preventing personnel from boarding the vessel to conduct a survey.
- Without a detailed survey it was unclear if the vessel was seaworthy to enter port.
- The sea state continued to cause the vessels to collide with each other, resulting in additional visible and unknown damage.
- Due to the damage there was a risk that the vessels could capsize and sink in the gulf, posing a navigation and spill threat to the immediate area, which is heavily used by commercial vessels.
- The vessels posed a risk of capsizing and sinking during a transit in the Brownsville Ship Channel, resulting in its closure to shipping traffic.
- Forecasts showed the weather was going to deteriorate and the seas continue to build, creating additional problems that could leave the vessels out in the gulf.

Using GLO vessel 427, Raymond Oliveira and Joseph Hilliard of the Land Office, along with USCG POs Mitchell Priest and Marshall Trede, responded offshore to visually determine the condition of the *Louie Tide*. After inspection, it was concluded that leaving the vessels in the Gulf of Mexico would result in a higher risk that one of the supply vessels could capsize and sink. It was decided to allow the vessels to enter the Brownsville Ship Channel using a tow plan developed to ensure their safe passage into the channel. In addition, a spill contingency plan was ready in case the vessel sank. After numerous hours offshore with sea state deteriorating, the vessels were escorted in by the USCG with assistance from GLO Region 4 personnel without further incident. Once again, the unified response by the GLO and USCG ensured a successful outcome.

GLO Participates in Earth Day Texas Event in Dallas

Gloria Maynard, Jesse Mayorga, Al Oswalt, Gray Powell, Santana Rangel and Angela Sunley—all members of the Oil Spill Prevention and Response Program of the Texas General Land Office—were on hand to meet, greet and share their GLO oil spill knowledge with the public during the recent Earth Day Texas event. The two-day annual festival was held on April 26th and 27th at Fair Park in Dallas. The free event was open to the public, offering a family-friendly atmosphere to increase environmental awareness and provide information that will help protect the environment. Approximately 500 exhibitors and 50,000 visitors attended the festival.

Region 2 Field Office personnel, Powell and Mayorga, brought the Region 2 airboat, and the much anticipated Prize Wheel was put to use. The visitors enjoyed taking photos with the airboat and spinning the wheel to see which prize they would take home. As part of the Green Speakers Series, Texas Land Commissioner Jerry Patterson spoke to the public about the future of recycled water in Texas. The Oil Spill Program is already looking forward to Earth Day Texas next year.

Land Commissioner Jerry Patterson gives the Oil Spill Program thumbs up at the Earth Day Texas event in Dallas. L to R (Back) Gray Powell, Santana Rangel, Patterson, Gloria Maynard and Al Oswalt. L to R (Front) Jesse Mayorga and Angela Sunley.

Texas City Y Spill Responders Faced Major Logistical Challenges at Matagorda Island

Matagorda Island is a 38-mile stretch of uninhabited gulf barrier island roughly seven miles from Port O'Connor. The island is a unit of the U.S. Fish and Wildlife Service (USFWS)–Aransas National Wildlife Refuge. It's accessible by helicopter or boat from either the Gulf of Mexico, Espiritu Santo Bay or Mesquite Bay. There are two docking locations available on the island, one on the north end and one on the south. Of these two docks, only the north dock can accommodate a vessel with more than a 2-foot draft. There are two beach access points across the dunes on the north and south ends, and there's only one "middle" road along the bay side that's usable. Adding to responders' problems are 19 state or federally listed threatened or endangered species, from peregrine falcons to Ridley sea turtles and Texas horned lizards.

Oil from the Texas City Y Spill that occurred in Galveston Bay on March 22 made it to the sandy beaches of Matagorda Island on March 27. Present during the response were Whooping Cranes, Piping Plovers and nesting Aplomado Falcons. And to top it all off, the response occurred on the very shore where Ridley sea turtles would soon be nesting. An epic logistical challenge was presented.

Matagorda Island was divided into working sections 001 through 012, each approximately three miles in length. Only sections 006 through 012 sustained impact from the oil. Of these sections, 009 through 012, on the south end, were heavily oiled. It took 30 days, 1,325 personnel, 103 dump trucks, 26 pieces of heavy equipment, 126 vehicles, 119 UTVs, 58 powered vessels, four barges, four fixed wing aircraft and seven helicopters, all working in coordination to remove more than 5.5 million pounds of oiled sand and debris from the island.

A day of clean up on the island began with a safety brief at 0630 at the staging area, then six task forces consisting of approximately 30 responders each would be loaded on to one of many crew boats to head across the bay toward the north end of the island. The boat trip from Martin Midstream, down the Gulf Intracoastal Waterway and across Espiritu Santo Bay took about 30 minutes. Once checked onto Matagorda Island, the workers had one of two methods of travel to reach the actual response area. One method included traveling by school bus on a monitored trip down the middle road to the secondary staging area on the south end.

A decontamination station and worker rest area is staged in the foredunes of Matagorda Island.

Empty dump trucks and full ones transited back and forth via barge daily—six trucks to a barge.

The middle road had seven pairs of nesting Aplomado Falcons, requiring the trip to be led and monitored by Resource Advisors from the USFWS. The presence of these endangered species limited transit across the middle road to one trip in the morning and one in the afternoon. Creatures spotted transiting the middle road would cause the convoy to grind to a stop for up to an hour. The other method of travel was moving four to six responders per UTV for a 28-mile trip along the gulf beach to the south end work area. Either route, from mainland to the work site, took roughly three hours to complete. At the end of each day, another three-hour trip back to the mainland would occur. Each day, empty dump trucks and full ones transited back and forth via barge—six trucks to a barge. When Mother Nature provided good tides and weather, the dump trucks could run down the beach empty from the north end and travel back, fully loaded, on the middle road in the evening. When Mother Nature wasn't kind and tides didn't allow, the loop was stopped and only one-way traffic could occur on the middle road. A good response day averaged five hours of actual shoveling on the beach. The only equipment that could be left on the gulf beach were the Bobcats, light mechanical equipment that was allowed to stay in a designated and protected site in the fore dunes. The Bobcats very slowly moved via gulf beach to their work locations each day. The rest of the 12-hour day was transit, safety, lunch, breaks and waiting for Mother Nature. Work had to stop early enough to decontaminate all equipment leaving the work zones and for the transit from the south end to the north end, if workers were to make it back to Port O'Connor before dark.

After an unsuccessful attempt to pick up the product using light mechanical equipment, the response came down to workers with shovels. This was not a response about how much sand and oil a responder could pick up with a shovel. This was a response about finesse, with each responder carefully scraping a layer of sand off the 2- to 3-inch layer of buried oil, then lifting off just the oil, without taking too much sand from below. The oil and sand were then dumped into piles that front loaders scooped up for deposit into dump trucks staged with each task force. The process was

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Logistical Challenges at Matagorda Island

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described as scraping icing off a layer cake and picking up the layer without disturbing the icing on the piece below. All work was completed under the watchful eye of Resource Advisors using a list of Best Management Practices.

Now imagine the sheer number of personnel and equipment needed to support a work force of over 200. The only ramp available for a barge to load and unload was at the north dock. This meant all supplies, UTVs, trailers, Port-a-Potties, sanitation stations, food, water, shade, safety, first aid, trash, supplies, hats, sun block, fuel, vans, trucks, mechanics, etc., had to be moved from the north dock staging area to the south staging area. At the end of 30 days, the process was down to a science, with each part of the response team knowing exactly what had to be done, what the task was, and how to get it done quickly, safely and efficiently.

Each evening, a progress meeting was held with Incident Command and task force leaders from Matagorda Island to streamline and strengthen the response. Every day lessons were learned and applied so the next day of work ran smoother. Each day the process safely sped up and became more efficient than the day before. One technique was to move light mechanical operators via shallow-draft fast-response vessels from the Rockport area across Mesquite and Copano bays to the south docks, so the movement of Bobcats could be completed by the time workers arrived on the beach. Another lesson learned was to pre-stage empty trucks on the south end and pre-stage full ones at the north end, allowing a constantly revolving line of trucks to leave the island.

By the successful conclusion of the response on April 25, a total of approximately 182,484 personnel work hours, 9,450 vessel operation hours, 23,550 UTV hours and 2,385 helicopter hours had gone into removing Texas City Y Spill oil from Matagorda Island. As a testament to the commitment of all the responders, there were no lost-time accidents reported during the response. The challenges faced by the responders, from Incident Command to task force members, was formidable, but one that was aptly met by all. The lessons learned will be invaluable as we work to update response plans and Area Contingency Plans to appropriately reflect the challenges met during this response, and to ensure we're well prepared for the next one.

Wildlife Rehabilitation Part of Texas City Y Spill Response

On Saturday afternoon, March 22, Wildlife Response Services, LLC (WRS) was notified by Kirby Inland Marine, LP about the Texas City Y spill incident. Once notified, Rhonda Murgatroyd of WRS traveled to the Texas City Dike and the Marine Safety Unit–Texas City to determine resource needs. An immediate request was made to mobilize the Texas General Land Office's Oiled Wildlife Response Trailers to the WRS Baytown Wildlife Facility, located at Phoenix Pollution Control & Environmental Services, Inc. in Baytown. They arrived the following day as requested. Additionally, five WRS personnel were activated and tasked with standing up the rehabilitation center, mobilizing two stabilization/holding trailers (one at the Texas City Dike and one at the Bolivar staging area), and populating resource requests for needed resources and transporting wildlife. Animals, both alive and deceased, began to arrive at the rehabilitation center on March 23rd, with the rehabilitated animals being released from the WRS Baytown Wildlife Facility on April 11.

Once additional animals were admitted, the rehabilitation effort for the spill response expanded to include experts who've worked throughout the world, and consultations with numerous veterinarians experienced with oiled wildlife via conference calls. Decontamination and demobilization began immediately following the release of all animals and all resources were demobilized effective April 18.

A steady hand and concentration provide much needed care.

"It's always regrettable when you see wildlife impact by an oil spill," said Richard Arnhart, GLO Region 2 Director and State On-Scene Coordinator for the spill event. "Fortunately, there are professionals like WRS who can quickly mobilize and start caring for these wild creatures. One of the most rewarding aspects of a spill is when you release wildlife back into the coastal environment."

Wildlife specialist released the first set of rehabilitated birds on April 4. See the video here.

Rehabilitation personnel provided updates on the wildlife being cared for at the Baytown Wildlife Facility.

Two Lesser Scaups prior to their release.

Improvise – Adapt – Overcome

"Improvise, Adapt, and Overcome" is an appropriate motto for oil spill responders, who must respond effectively to rapidly changing and unexpected situations. Clint Eastwood's character used the term in "Heartbreak Ridge" to encourage his Marines to plan for uncertainty and be flexible in ever-changing situations. During oil spill events, responders frequently encounter less than favorable conditions, or situations that could affect a response outcome. The best area contingency plan cannot foresee every situation or turn of events. Although many factors affect oil spill events, weather is the one element that can't be controlled.

Wind can effectively keep product against a bulkhead, allowing for easy recovery and a low response cost, or it can force spilled product to migrate into sensitive wildlife habitat and busy shipping areas, driving response costs to astronomical levels. It can prevent responders from waging an efficient response and turn it into a complete failure. Uncooperative weather creates doubts and worries in the responder's mind: Can we launch boats today? Will the thunderstorms shut down operations? Will we be able to prevent the oil from migrating? What will happen when the wind shifts to the north from the south? Will the booming strategy set this morning work this afternoon? Will the fog lift so we can launch aircraft? Will it be 100 degrees again today? These are just a few of the concerns prompted by weather conditions.

Unfortunately, inclement weather can make even a seasoned Unified Command (UC) appear ineffective, but this can be alleviated by taking the following proactive steps:

Step One—Review Past Spill Events: Knowing historical data from past spills can greatly enhance future response. These spills should be captured within the Area Contingency Plan for review by new staffers and to serve as reminders for seasoned veterans.

Step Two—Natural collection site: Locate natural collection sites by locating debris along shore-lines prior to an event. This will indicate where wind and currents typically deposit floating trash. Placing collection boom in these areas can go a long way toward collecting product when weather is not in your favor and other booming strategies won't work due to wind and wave action. Sometimes barges can be used when boom is not effective.

Step Three—Test booming strategies: Drawing boom on a map may look good, but until it's actually deployed it has not been tested. Drills are an excellent opportunity to test booming effectiveness, but an actual event is the ultimate reality check.

Step Four—Understand limitations: We all want to do the best job we can to contain, collect, protect and remove oil from the water. Sometimes circumstances are beyond our control and we can't do what we want to do. Safety is always the number one objective in every spill event and must be factored into every response.

Step Five—Enlist a meteorologist: Having a meteorologist from the National Weather Service working in the IC can greatly aid in predicting today's and tomorrow's weather conditions and drive planning and operations accordingly.

Hellos and Goodbyes in the Spill Response Community

Joseph Hilliard

Eighteen year Oil Spill Prevention and Response Division employee Joseph Hilliard announced his retirement, effective July 2nd. A Senior Response Officer in the Brownsville field office, Hilliard has provided exemplary service to our stakeholders and his fellow employees since 1996. After retiring from a 21- year career in the U.S. Coast Guard, Hilliard joined the Brownsville field office as one of its first employees. His devotion to duty and love of teaching will be sorely missed. Thank you Joseph for your years of service to the General Land Office and the citizens of Texas.

Joseph Hilliard.

Dr. Paige Doelling

The Texas General Land Office would like to welcome Dr. Paige Doelling, NOAA Scientific Support Coordinator (SSC), to the Gulf of Mexico and our family of spill response personnel. Dr. Doelling comes to the District 8 SSC position with a strong background in ecotoxicology, protected resources and interagency coordination.

In her most recent position at National Marine Fisheries Service (NMFS), she worked on Endangered Species Act (ESA) Section 7 consultations with the Environmental Protection Agency (EPA) on pesticides and water quality issues, and spent a year at NOAA Headquarters as a Fishery Policy Advisor. She has worked for several federal agencies, including the EPA, where she wrote ecological risk assessments for pesticides; and the U.S. Fish and Wildlife Service's Chesapeake Bay Field Office, where she did stream assessment and restoration, and worked on a range of contaminant issues. Her dissertation research focused on the trophic transfer of poly-chlorinated biphenyls in an estuarine food web. She served as a commissioned officer in the U.S. Air Force, providing imagery and targeting support to U.S. troops during Operation Desert Shield/Desert Storm, and later spent several years as a defense consultant working with imagery-based products and information.

Dr. Paige Doelling.

She holds a Ph.D. in Environmental Science and Public Policy, an MA in International Transactions, a BS in Biochemistry, and a First-Degree Black Belt in Tae Kwon Do. When not at work, she's likely to be found outside hiking, motorcycling or boating with her family of two college kids, boyfriend, and a pair of black Labradors.

Paige's friendly disposition and extensive academic and career background will make her an extremely valuable asset and team player in our unified spill response position along the Gulf of Mexico coastline. Welcome, Paige!